PSHENICHNOVA, N.K.

Antibacterial properties of preparations from the meadow geranium. Trudy Perm. farm. inst. no.1:81-85 '59. (MIRA 15:1)

1. Permskiy farmatsevticheskiy institut, kurs mikrobiologii.
(GERANIUMS) (BACTERICIDES)

S/081/62/000/013/014/054
B158/B144

AUTHORS: Berdinskiy, I. S., Pshenichnova, N. R.

TITLE: Substituted hydrazides of hydroxycarboxylic acids. V. Antitubercular activity of arylhydrazides of dialkylglycolic acids

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 215, abstract 13Zh146 (Uch. zap. Permsk. un-t, v. 19, no. 1, 1961, 67-70)

TEXT: The antitubercular activity of a number of arylhydrazides of dialkylglycolic acids $ArNHNHCOC(OH)R_2$ (I) was studied in vitro. I (Ar = p-BrC_6H_4, R = C_4H_9) and I (R = C_2H_5, C_4H_9, C_6H_5, p-$CH_3C_6H_4$, o-$CH_3OC_6H_4$) proved to be active. The activity is lost by acetylation and substitution of the C_6H_5 radical for $C_{10}H_7$ at the nitrogen. In vivo testing of I (Ar=C_6H_5, R = C_6H_5 and C_4H_9) showed that their antitubercular activity approaches that of isoniazid. For a study of the effect of substitution of the C_6H_5 aryl radical for $C_{10}H_7$ in I on the antitubercular

Card 1/2

F

A

FORMATION OF PACK IN PNEUMATIC STOWING. Pshenko, M.N. (Ugol(Coal), Jan. 1952, 22-25). Experiments are recorded on the distribution and density of pack obtained with a Soviet PM-1 pneumatic stower. (U).

P'H NIC'BY, P.

Finance

Registration of tables of organization and estimates for 1953. Fin. i kred. SSSR No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

BC

B-III-2

Cold and hot defeco-carbonatation [of sugar juice]. A. M. [illegible] and B. P. [illegible] (Trudi Zavod. [illegible], 19[illegible], No. 11; Internat. Sugar J., 19[illegible], [illegible], [illegible]).—Cold defecation (at [illegible]°) gave an increase of 1–1·5° purity as compared with hot defecation (at [illegible]°), the ash content, including the Ca salts, being about the same in both cases. After the first carbonatation the cold-defecated juice had the lighter colour, but after the second there was little difference. If the second carbonatation was operated at [illegible]°, [illegible] the colour was much better. Cold-defecated juice filtered better, and on the whole preference is given to this modification of the carbonatation method. J. P. O.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Deceased

Aleksandr IAkovlevich Pshenichnyi (1916-1964); an obituary. Meteor. i gidrol. no.5:63-64 My '64. (MIRA 17:6)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

B-3-2

Clarification of syrups and remelt. A. M. [illegible] and E. P. [illegible] (Nauk. Zapiski Tsuk. Prom., 19[illegible], 2[illegible], 73—[illegible]).—Addition of CaO does not darken sulphitated juices, but increases the amount of Ca salt; Na_2CO_3 decreases the latter, but slightly increases the colour. The juice of the first carbonatation or remelt, when sulphitated to pH 8—9, becomes darker, and further sulphitation to pH > 7 increases the Ca salt. Juice sulphitated to pH 6 is treated with 0·2% Na_2CO_3 and 0·25—0·5% CaO, carbonatated to pH 9·5, [illegible], and filtered. The remelt is treated with 1—3% CaO on the wt. of sugar, carbonatated to pH 9—9·5, filtered, and sulphitated to pH 7—7·5. Filtered and non-filtered juices sulphitated by the same amount of SO_2 give a lower and a higher pH, respectively.

Ch. Abs.

COMMON ELEMENTS

OPEN

MATERIALS INDEX

COMMON VARIABLES INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

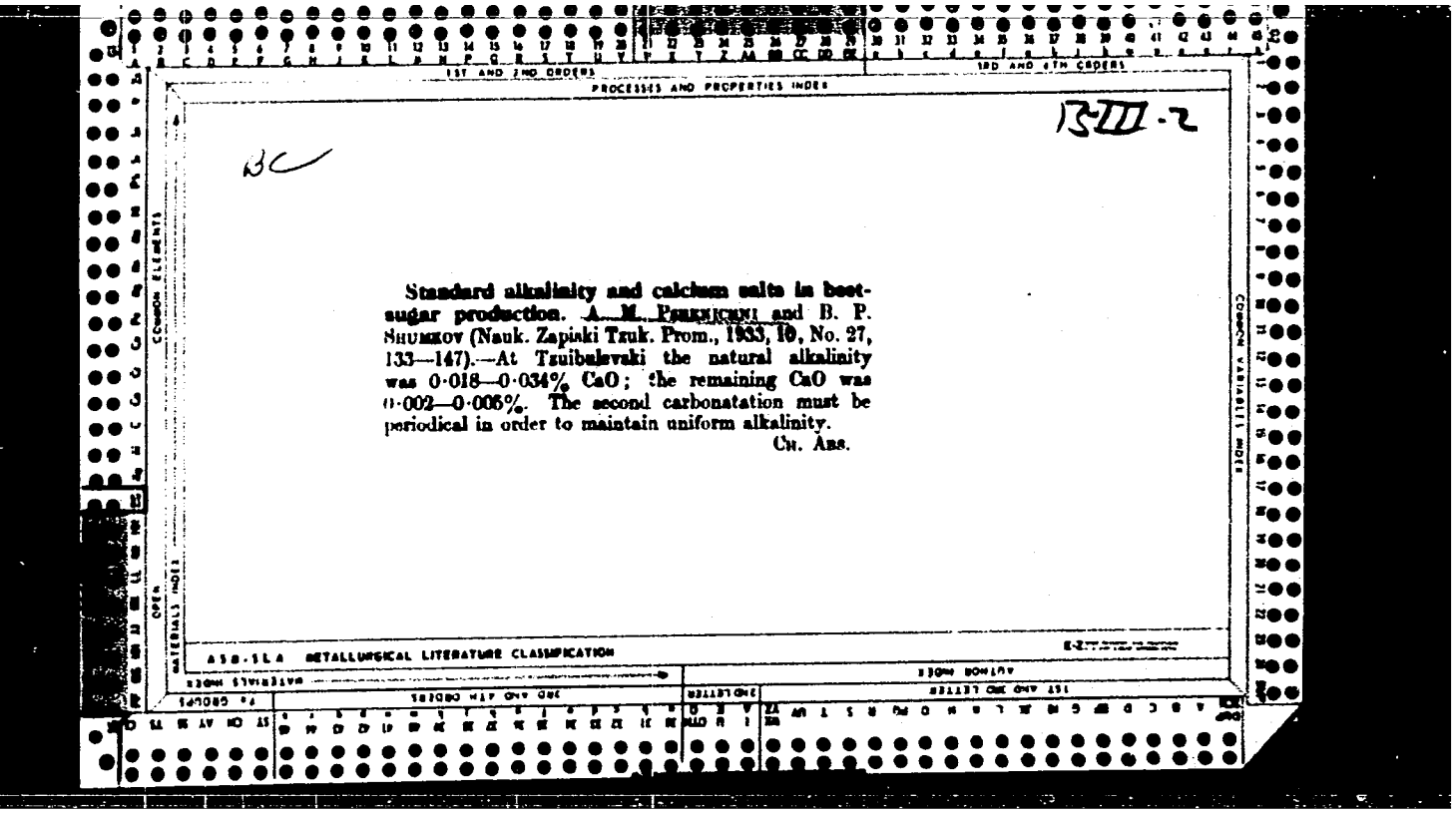
AUTHOR INDEX

1ST AND 2ND LETTER

2ND LETTER

3RD AND 4TH ORDERS

PH GROUPS



PROCESSES AND PROPERTIES INDEX

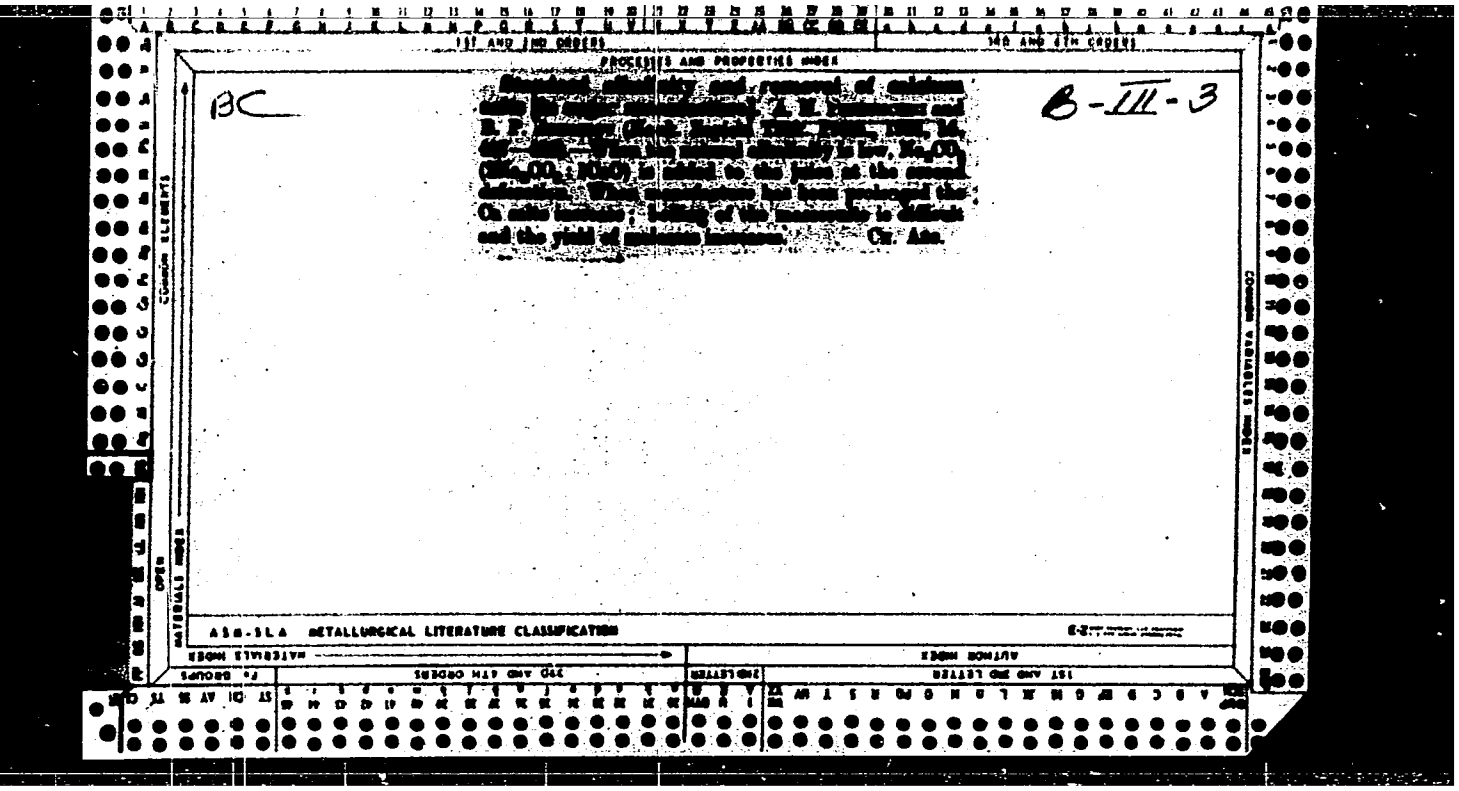
13-III-2

BC

Standard alkalinity and calcium salts in beet-sugar production. A. M. Pshenichni and B. P. Shumkov (Nauk. Zapiski Tzuk. Prom., 1933, 10, No. 27, 133—147).—At Tzuibulevski the natural alkalinity was 0·018—0·034% CaO; the remaining CaO was 0·002—0·006%. The second carbonatation must be periodical in order to maintain uniform alkalinity.

Ch. Abs.

A38-51A METALLURGICAL LITERATURE CLASSIFICATION



PSHENICHNYI, B.N. (Kiyev)

Numerical method of solution of certain problems of optimum control. Zhur. vych. mat. i mat. fiz. 4 no.2:292-305 Mr-Ap '64. (MIRA 17:7)

PSHENICHNYI, M. [Pshenychnyi, M.]

"Veseli Bokoven'ky." Znan. ta pratsia no.7:20-22 Jl '61.
(MIRA 14:8)
(Kirovograd Province--National parks and reserves)

BOSYY, B., inzh.; IVANOV, Yu., inzh.; PSHENICHNYY, A., inzh.

Some methods of chemical cleaning of the surface of ship machine parts. Mor. flot 21 no.8:33-34 Ag '61. (MIRA 14:9)
(Marine engines--Cleaning)

TYURKYAN, R.A., gornyy inzh., laureat Leninskoy premii; GROLOV, P.I., gornyy inzh., laureat Leninskoy premii; PSHENICHNYY, A.A., gornyy inzh., Geroy Sotsialisticheskogo Truda; TIKHONOV, N.N., Geroy Sotsialisticheskogo Truda

About Kh.I.Abramson's remarks on the "Guide to subsequent grouting during shaft sinking." Ugol' Ukr. 4 no.2:45 F '60. (MIRA 13:6)
(Shaft sinking) (Grouting) (Abramson, Kh.I.)

PSHENICHNYY, A.A., inzh., Geroy Sotsialisticheskogo Truda

Some results of sinking a shaft at the No.29 Mine of the Rutchenkovugol' Trust. Shakht.stroi. 8 no.12:12-14 D '64.
(MIRA 18:1)

1. Nachal'nik 1-go prokhodcheskogo upravleniya tresta Donetskshakhtoprokhodka.

PSHENICHNYY, A.A., inzhener; RAKOV, I.L., inzhener.

Ventilationshaft sinking at the "Butovskaia-Glubokaia" mine.
Shakht.stroi. no.3:20-26 Mr '57. (MLRA 10:7)
(Donets Basin--Shaft sinking) (Mine ventilation)

PSHENICHNYY, A. P., Cand Agr Sci -- (diss) "Test of the improvement of Kazakh fine-fleeced sheep. (From the example of the kolkhoz im Stalin of the rayon im 28th Guardsmen, in the Alma-Ata oblast)." Moscow, 1960. 17 pp; (All-Union Scientific Research Inst of Animal Husbandry); 150 copies; price not given; (KL, 26-60, 141)

SPIVAK, M.S., golovnyy redaktor; BILOZUB, V.G., redaktor; VASILENKO, P.M., redaktor; ZORIN, I.G., redaktor; IL'CHENKO, I.K., redaktor; KOVAL', O.G., redaktor; KRILOV, O.F., redaktor; PUKHAL'S'KIY, A.V., redaktor; SIDORENKO, O.P., redaktor; FEDCHENKO, O.N., redaktor; ANGELINA, P.M., redaktor; BUZANOV, I.F., redaktor; BOYKO, D.V., redaktor; BURKATS'KA, G.E., redaktor; VASILENKO, A.O., redaktor; VLASYUK, P.A., redaktor; GORODNIY, M.G., redaktor; DEMIDENKO, T.T., redaktor; DUBKOVETS'KIY, F.I., redaktor; KIRICHENKO, F.G., redaktor; LITOVCHENKO, G.P., redaktor; OZERNIY, M.O., redaktor; PERSHIN, P.M., redaktor; POPOV, F.A., redaktor; POSMITNIY, M.O., redaktor; PSHENICHNIY, P.D., redaktor; RADCHENKO, B.P., redaktor; POMANENKO, S.S., redaktor; RUBIN, S.S., redaktor; SAVCHENKO, M.Kh., redaktor; SOKOLOVS'KIY, O.N., redaktor; TSIBENKO, K.O., redaktor; SHCHERBINA, O.P., redaktor; KRAVCHENKO, M.F., tekhnichniy redaktor

[Collective farm encyclopedia] Kolhospna vyrobnycha ensyklopediia. Vyd. 2-e, perer. i dop. Kyiv, Derzh.vyd-vo sil's'kohospodars'koi lit-ry URSR. Vol.1. Abrykos - Liutserna. 1956. 756 p. (MIRA 9:9) (Agriculture--Encyclopedias and dictionaries)

PSHENICHNYY, A.Ya.; SARYMSAKOV, T.A., deystvitel'nyy chlen.

Method for approximate calculation of the intensity of precipitation. Dokl.AN Uz.SSR no.3:6-9 '49. (MLRA 6:5)

1. Institut matematiki i mekhaniki AN Uz.SSR (for Pshenichnyy).

2. Akademiya Nauk Uzbekskoy SSR (for Sarymsakov). (Precipitation (Meteorology))

PSHENICHNYY, A.Ya., inzh.

Shaft sinking with simultaneous lining in complex ore deposits of Kazakhstan. Shakht.stroi. 8 no.12:6-8 D '64.

(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnoy metallurgii.

3(0)
AUTHORS: Pshenichnyy, A. Ya., Romanov, N. N. SOV/50-59-1-17/20

TITLE: Lev Aleksandrovich Molchanov (His 80th Birthday) (Lev Aleksandrovich Molchanov (k 80-letiyu so dnya rozhdeniya))

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 1, pp 66-67 (USSR)

ABSTRACT: Molchanov was born in 1878. He studied at the Physico-Mathematical Faculty of Moscow University. Already as a student, Molchanov worked at the ornithology of the Crimea, and took part in many expeditions, including to the Yenisey. In 1911-14 he wrote papers on the geography and climate of Central Asia. After completing his studies at the University, Molchanov worked as a teacher at secondary schools and later at the Universities of Tambov and Saratov. In 1921-33 he had the Chair of Geography at the Sredneaziatskiy universitet (Central Asian University). Since 1933 he has been Professor of Physics and Farming Meteorology at the Tashkentskiy sel'skokhozyaystvennyy institut (Tashkent Institute of Agriculture). In 1938 he received the titles of Doctor of Geographical Sciences and of Professor of Physics and Agrometeorology. Beside his pedagogic activity, Molchanov worked at the Sredneaziatskiy nauchno-issledovatel'skiy meteorologicheskiy institut

Card 1/2

Lev Aleksandrovich Molchanov(His 80th Birthday) SOV/50-59-1-17/20

(Central Asian Scientific Research Institute of Meteorology) where he headed the research work on the climate of Central Asia. He wrote a great number of climatological and agro-meteorological monographs. His investigations were important for the development of cotton cultivation and other branches of agriculture. Besides, Molchanov kept on occupying himself with ornithology and hunting. He also took part in public life, and was for a long time President of the Uzbekskiy filial Vsesoyuznogo geograficheskogo obshchestva (Uzbekian Branch of the All Union Society of Geography), a member of the Administration of the House of Scientists, and of the Hunters' Federation. Molchanov was awarded the Lenin Order and the Order of the Red Banner.

Card 2/2

PSHENICHNYY, A.Ya.

BUGAYEV, V.A.; DZHORDZHIO, V.A.; KOZIK, Ye.M.; PETROSYANTS, M.A.; PSHENICHNYY, A.Ya.; ROMANOV, N.N.; CHERNYSHEVA, O.N.; SARYMSAKOV, T.A., akademik, red.; GOR'KOVOY, P.I., red.izd-va; GOR'KOVAYA, Z.P., tekhn.red.

[Synoptic processes of Central Asia] Sinopticheskie protsessy Srednei Azii. Tashkent, Izd-vo Akad. nauk Uzbekskoi SSR, 1957. 477 p. (MIRA 11:7)

1. Akademiya nauk UzSSR (for Sarymsakov)
(Soviet Central Asia--Climate)

DEMIDOV, M.S.; PSHENICHNYY, A.Ya. [editors]

[Scientific works of students of the higher educational institutions of the Uzbek SSR] Nauchnye raboty studentov vuzov Uzbekskoi SSR. [Otvetstvennye redaktory M.S.Demidov i A.IA.Pshenichnyi] Tashkent, 1952. 125 p.
(MLRA 6:7)

(Uzbekistan--Science) (Science--Uzbekistan)

PSHENICHNYY, A.Ya.

Statistical relations of types of atmospheric circulation in the Northern Hemisphere. Izv.AN SSSR.Ser.geog. no.3:77-84 My-Je '56. (MLRA 9:11)

1. Institut matematiki i mekhaniki AN Uzbekskoy SSR.
(Atmosphere)

PSHENICHNYY, A.Ya.; ROMANOV, N.N.

Lev Aleksandrovich Molchanov; on his 80th birthday. Meteor. i gidrol. no.1:66-67 Ja '59. (MIRA 12:3)
(Molchanov, Lev Aleksandrovich, 1878-)

PETROSYAN, M.A., red.; KOZIK, E.M.; PSHENICHNYY, A.Ya.; ROMANOV, N.N., red.; BUGAYEV, V.A., red.; DZHORDZHIO, V.A., red.; NAZAROVA, T.L.; CHERNYSHOVA, O.N.; STRAUMAL, O.N., red. izd-va.

[Atlas of typical synoptic processes over Central Asia] Atlas tipichnykh sinopticheskikh protsessov nad Srednei Aziei. Tashkent, 1954. 116 maps (in portfolio). (MIRA 11:7)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. Institut matematiki i mekhaniki.
(Soviet Central Asia--Climatology--Charts, diagrams, etc.)

PSHENICHNYY, A.Ya., inzh.

Results of a poor organization of work. Bezop.truda v prom. 6 no.3:11-12 Mr '62. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov.

(Altai Mountain region—Mining engineering)

PSHENICHNYY, A.Ye., kand. sel'skokhoz. nauk; CHERNYKH, M.A.

Central Chernozem Region. Zemledelie 27 no.9:74-76 S '65.
(MIRA 18:10)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva TSentral'no-chernozemnoy polosy.

PSHENICHNYY, A. Ye.

USSR

The reciprocal relation between mineral and organic nutrition of higher plants and the utilization of humic acids as fertilizer. L. A. Khristeva, L. R. Pivovarov, A. E. Pshenichnyi, and I. I. Yarchuk (Agr. Inst., Kherson). *Pochvovedenie* 1954, No. 12, 1–10; cf. *C.A.* 47, 5598f.—Addns. of 500 ml. of 0.001% soln. of Na humate, extd. from peat, to 12 kg. of sand and the standard nutrient soln. gave a considerable increase of potatoes. With a soln. 1:1:1 of NPK as the standard, addns. of Na humate made it possible to reduce the amt. of P to 1/10 and still the yields were higher and the vitamin C content also increased. Addns. of humate had a pos. effect on the formation of invert sugars in the leaves of potatoes. With low N levels there was the highest accumulation of sugar in the leaves. During flowering, the cultures treated with humates increased the ratio of disaccharides to monosaccharides. This indicates that the humates are effective in converting the simple into more complex sugars. It is postulated that the humates are assocd. with the oxidation-reduction potentials. This is

(over)

PSHENICHNYY, A. YE.

"A System of Simultaneous Irrigation and Fertilization of Winter Wheat Crops in the South of the Ukrainian SSR." Min. Higher Education USSR, Belaya Tserkov' Agricultural Inst., Kherson, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

M

Country : USSR
Category: Cultivated Plants. Grains.

Abs Jour: RZhBiol., No 22, 1958, No 100222

Author : Pshenichnyy, A.Ye.; Eynokh, Ye.S.
Inst : Khar'kov University
Title : The Influence of Humic Fertilizers on the Yield and Milling-Bread-Baking Qualities of Winter Wheat Grown with Irrigation in the South of Ukrainian SSR.

Orig Pub: V sb.: Guminovyye udobreniya. Khar'kov, Khar'kovsk. un-t, 1957, 245-256.

Abstract: Results of the experiments (1952-1954) at Kherson Agricultural Institute with OD-12 wheat. Moisture charging and vegetative

Card : 1/2

very favorably reflected in the yield and commercial qualities. A direct correlation was found between the protein and gluten contents and the witreousness of the grain, whereas there is no correlation between the volume yield of the grain and the content of proteins and gluten. Therefore, no direct relation has been observed between the bread-baking qualities and the protein content. -- Ye. I. Saks

Card : 2/2

PSHENICHNYY, A.Ya., inzh.

Make use of potentialities to increase the rate of mine shaft sinking in complex metal ore deposits. Shakht.stroi. 9 no.11:6-7 N '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy gornometallurgicheskiy institut tsvetnykh metallov.

PSHENICHNYY, A.Ya.; KALININ, M.N.; SMIRNOV, V.G.; AKIMOV, Ye.T.; SEMENYUTA, N.N.

Shaft sinking with the use of a shaft lining formwork. Gor.zhur. no.4:32-36 Ap '64. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy gornometallurgicheskiy institut tsvetnykh metallov (for Pshenichnyy, Kalinin, Smirnov). 2. Trest Svinetsshakhtostroy (for Akimov). 3. Glubochanskoye shakhtostroyupravleniye (for Semenyuta).

KALININ, M.M., inzh.; KLIGER, B.A., inzh.; PSHENICHNYY, A.M., inzh.

Shaft lining plumbbob with a lifting device inside. Shakht. stroi. 8 no.8:15 Ag '64. (MIRA 17:9)

USSR / Plant Physiology. Mineral Nutrition.

Abs Jour : Ref Zhur - Biol., No 22, 1958, No 99914

Author : Khristeva, L. A.; Pshenichnyy, A. Ya., and Pivovarov, L.R.
Inst : Kherson Agricultural Inst.
Title= : The Interrelationship of the Organic and Mineral Nutrition of Agricultural Plants and the Influence of Environmental Conditions on These Processes.

Orig Pub : Nauchn. Zap. Khersonsk. S.-Kh. In-ta, No 6, 61-82, 1957

Abstract : Description of the results of vegetation and field experiments conducted since 1946 with regard to investigating the role of humic acid (HA) in the nutrition of agricultural plants. The influence of HA on metabolism and harvest is more noticeable under conditions of the deviations of mineral nutrition from the norm. At a deficiency of P or excess of N the introduction of HA caused a considerable increase

Card 1/2

I

COUNTRY : USSR
CATEGORY : Plant Physiology. Respiration and Metabolism.

ABS. JOUR. : RZhBiol., No. 6 1959, No. 24500

AUTHOR : Khristeva, L.A.; Pshenichny, A.Ye.; Pivovarov, L.R.
INST. : Khar'kov University
TITLE : The Influence of Humic Acid on the Activity of Higher Plants Under Different Conditions of Mineral Nourishment and Enviroment.

ORIG. PUB. : V sb.: Guminovyye udobreniya, 1957, 109-126

ABSTRACT : Sprouts of agricultural plants were grown in sandy cultures with different proportions of N and P in the feeding mixture. Na humate was added in quantities of 25 milliliters of 1% dilution per container. The Na humate contributed to a fuller use of mineral nutriments by the plants, especially in conditions of deviation from standard mineral nourishment (phosphoric starvation). Under conditions of normal N supply, Na humate contributed to a better use of P, increased the

CARD: 1/3

I

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 6, 1959, No. 24500

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : activity of catalases and amylases, and stimulated the formation of sugars and protein, especially during the vernalization phase. Na humate aids in the formation of protein in the beginning of plant development and of carbohydrates in the flowering stage. Na humate increased the drought resistance of the plants and during periods of water scarcity promoted better use of mineral nutriments. The increased effectiveness of Na humate when the plants are in unfavorable

CARD: 2/3

ABSTRACT : environmental conditions is explained by the fact that its polyphenolic groupings increase the activity of the phenolase oxidizing system and

CULTIVATED PLANTS. Grains. Leguminous Grains. Tropical Cereals

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15582

AUTHOR : Pshenichnyy, A.Ye.
INST. : Kherson Agric. Inst.

TITLE : System of Fertilization of Winter Wheat under Irrigation in the South of the Ukraine SSR.

ORIG. PUB. : Nauchn. zap. Khersonsk. s.-kh. in-t, 1957, vyp. 6, 34-46

ABSTRACT : A description is given of field experiments and laboratory investigations in studying the role of basic and with-sowing fertilizer, supplementary fertilizer, the combination of with-sowing fertilizer and supplementary fertilization of winter wheat, grown after various preceding crops, on a background of varied irrigation conditions. In the south of the Ukraine (in irrigation conditions) the main predecessors of winter wheat are grain and

CARD: 1/4

M

COUNTRY :
CATEGORY : CULTIVATED PLANTS.

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15582
:
AUTHOR :
INST. :

TITLE :

ORIG. PUB. :

ABSTRACT : tilled crops. Placement of phosphorus fertilizer at the time of sowing is most effective under winter wheat grown after a stubble predecessor. It is recommended that the base fertilizer be placed under the preceding crop. In the irrigated conditions of southern Ukraine the most effective system of fertilizing winter wheat after a stubble predecessor is the combination of organo-mineral fertilizer at the time of sowing with

CARD: 2/4

22

ABS. JOUR. :
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :

ABSTRACT : spring supplementary fertilizer [illegible] the tillering phase and additional [illegible] in the shooting and milky stage [illegible] watering [illegible] in the presence of vegetation [illegible] after a tilled predecessor - a combination of organo-mineral fertilizer with [illegible] at the time of sowing [illegible] full fertilizer [illegible] in the shooting [illegible] the tillering phase and [illegible] in the earing phase. It is essential [illegible] stage.

3/4

CARD:

COUNTRY : M

CATEGORY : CULTIVATED PLANTS.

ABS. JOUR. : REF ZHUR BIOLOGIYA, NO. 4, 1959, No. 15[illegible]

AUTHOR :

INST. :

TITLE :

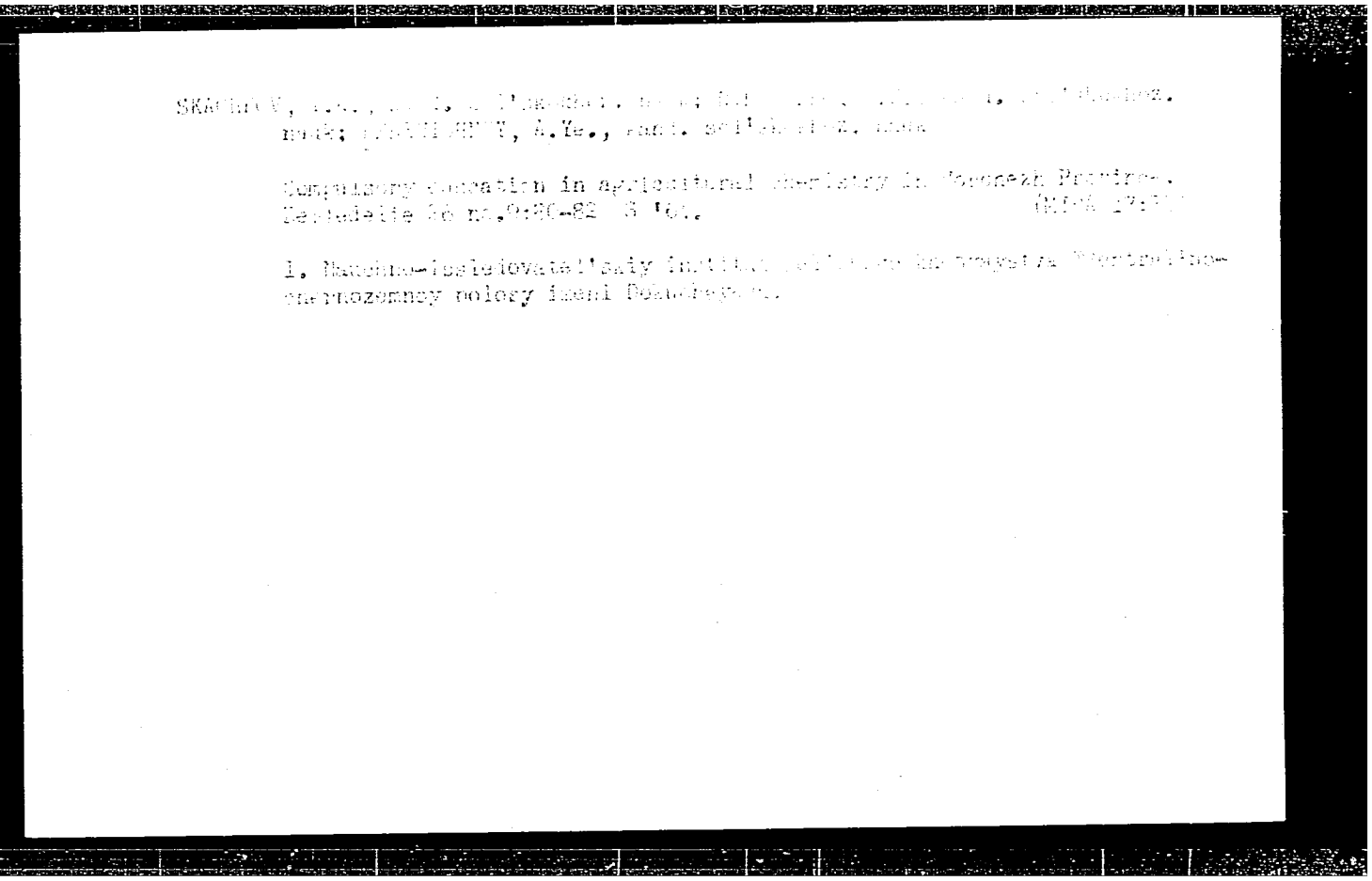
ORIG. PUB. :

ABSTRACT : to place fertilizer with irrigating water.

-- N.P.[illegible]

CARD: 4/4

23



SOINTSOV, A.; PSHENICHNYY, B.; SMIRNOV, Yu., red.

[The roof of the world] Krysha mira. Dushanbe, Irfon, 1965. 214 p. (MIRA 18:11)

MARKOV, S.A.; PSHENICHNYY, B.N.

Calculating high- and medium-pressure gas pipelines. Gaz. prom. 7 no.3:26-30 '62. (MIRA 17:8)

S/123/62/000/013/004/021
A004/A101

AUTHOR: Pshenichnyy, B. N.

TITLE: Effect of pitch, width and depth of the inter-thread flute of rectangular shape on the sealing quality of oil screw thread

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1962, 42, abstract 13A268 ("Tr. Saratovsk. in-ta mekhaniz. s. kh.", 1961, no. 22, 135 - 139)

TEXT: It is pointed out that the main criterion characterizing the sealing quality of oil screw threads is the magnitude of the maximum pressure the oil screw thread can withstand without the oil leaking through the clearance. This magnitude depends on a number of factors, among others on the thread geometry. Based on tests carried out, it was found that the optimum value of the pitch of rectangular-shaped oil screw thread amounts to approximately 0.135 of the shaft diameter on whose surface the thread is cut. The most expedient values of the width and depth of the inter-thread flute of the thread amounts to 0.5 of the optimum pitch value of the latter.
[Abstracter's note: Complete translation]

Card 1/1

PSHENICHNYY, B.N. [Pshenychnyi, B.N.]

Presentation of the solution of linear algebraic equations using determined integrals. Zbir. prats' ■ obchys. mat. i tekh. 3:42-44 '61. (MIRA 15:2)

(Linear equations)

PSHENICHNYY, B.N. [Pshenychnyi, B.M.]

Algorithm for deriving optimal solutions in a discrete space for a certain class of problems. Dop. AN URSR no.9:1154-1157 '62. (MIRA 18:4)

1. Vychislitel'nyy tsentr AN UkrSSR.

PSHENICHNYY, B.N. (Kiyev)

Transportation problem with even distribution of customers. Zhur. vych. mat i mat fiz. 3 no.6:1089-1102 N-D '63. (MIRA 17:1)

BR

S/0208/64/004/002/0292/0305

ACCESSION NR: AP4024562

AUTHOR: B. N. Pshenichny*y (Kiev)

TITLE: Numerical method for solving problems of optimum control

SOURCE: Zhurnal vy*chislitel'noy matematiki i matematicheskoy fiziki, v. 4, no. 2, 1964, 292-305

TOPIC TAGS: optimum control, phase condition, maximum principle, game theory, control theory

ABSTRACT: This paper is a continuation of the author's previous work (Chislenny*y metod rascheta optimal'nogo po by*strodeystviyu upravleniya dlya lineyny*kh sistem. Zh. vy*chisl. matem. i matem. fiz., 1964, 4, No. 1, 52-60). The method presented there makes little use of the linearity of the equations. Thus, it admits a generalization to other classes of functions. An algorithm for an iterative procedure is presented for solving the following problem. Let an object be described by the system of equations

$$X(t) = \int_0^t K(t, \tau, u(\tau))\, d\tau,$$

where X(t) is an

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ACCESSION NR: AP4024562

n+1-dimensional vector, $X = [x_0(t), x(t)]$ where x is an n-dimensional vector, $K(t,\tau,u) = [k_0(t,\tau,u), k(t,\tau,u)]$ is a continuous n+1-dimensional vector function, u is an r-dimensional control vector taking values in a closed bounded set $U \subset E^r$. Define the control $u(\tau)$ in an interval $0 \leq \tau \leq T$ such that it satisfies $x(T) = x_1$, where x_1 is a given n-dimensional point and $x_0(T)$ is minimal. A theorem analogous to Pontryagin's maximum principle is used. Digital computations indicate that the method converges quickly in the case of no phase conditions. New necessary conditions for optimizing a linear system with phase restrictions are given. The following system of equations is considered:

$$\frac{dx}{dt} = Ax + Bu + f(t), \qquad x(0) = x_0, \qquad u \in U,$$

for the condition $p(x) \geq 0$, where p(x) is a continuous differentiable convex vector function, and U is a convex set in E^r. A maximal linear form $(c,x(T))$ is desired for a fixed T. The obtained results show that problems with phase conditions can be reduced to game theory problems without phase conditions. Orig. art. has: 87 equations.

ASSOCIATION: none

Card 2/3

ACCESSION NR: AP4012003 S/0208/64/004/001/0052/0060

AUTHOR: Pshenichnyy, B. N. (Kiev)

TITLE: Numerical method for computing control which is optimal, in the high speed sense, for linear systems

SOURCE: Zhurnal vychisl. matem. i matem. fiz., v. 4, no. 1, 1964, 52-60

TOPIC TAGS: optimal control, high speed control, numerical method, linear system, Pontryagin maximum principle

ABSTRACT: The author treats a numerical method for solving the problem of choosing a control which is optimal, in the sense of highest speed, for linear systems. Consider the system of equations

$$\frac{dx}{dt} = A(t)x + G(t, u), \qquad (1)$$

where x is an n-dimensional vector, A(t) is a matrix continuously depending on time, u(t) is an r-dimensional vector, at each moment of time belonging to some closed bounded set U of r-dimensional space, G(t,u) is a continuous vector-function. The problem is to find a function $u(t) \in U$ such that $x(t_0) = x_0$, $x(t_1) = x_1$,

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ACCESSION NR: AP4012003

and the difference $t_1 - t_0$ is minimal. For construction of the optimal control, the author makes use of a lemma which is essentially a variant of the Pontryagin maximum principle. Orig. art. has: 34 formulas.

ASSOCIATION: none

SUBMITTED: 24Dec62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 003 OTHER: 000

Card 2/2

PSHENICHNYY, B.N.

Dual method in extremum problems. Part 2. Kibernetika no. 4: 64-69 Jl-Ag '65. (MIRA 18:12)

1. Submitted Jan. 18, 1965.

L 32043-65 EWT(d)/T Pg-4 IJP(c)

ACCESSION NR: AP5005792 S/0208/65/005/001/0098/0106

AUTHOR: Pshenichnyy, B. N. (Kiev) 14 B

TITLE: The duality principle in convex programming problems

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 5, no. 1, 1965, 98-106

TOPIC TAGS: convex programming, duality principle, automatic programming, control optimization

ABSTRACT: The following problem is discussed: Find the minimum z_0 under the conditions

$$z_i \geqslant 0, \quad 1 \leqslant i \leqslant m; \qquad z_i = 0, \quad m < i \leqslant n; \qquad z \in M, \tag{1}$$

where z is an (n+1)-dimensional vector with components z_i, $i = 0, 1, \ldots, n$. In addition, 1) M is a bounded closed group; 2) if $c \in K = \{c: c_0 < 0, c_i \geqslant 0, 1 \leqslant i \leqslant m\}$, then there exists a unit vector $z(c) \in M$ such that

$$(c, z(c)) \geqslant (c, z), \quad z \in M; \tag{2}$$

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L 32043-65

ACCESSION NR: AP5005792

3) the algorithm which associates a $z(c) \in M$ to each $c \in K$ is known; and 4) the set of points N satisfying the condition (1) is not empty, and for each i, $1 \leq i \leq m$ one can find such $z \in N$ that $z_i > 0$, and for each i, $m < i \leq n$ one can find points $z^{(1)} \in M$ and $z^{(2)} \in M$ such that $z_i(1) > 0$ and $z_i^{(2)} < 0$, while all other coordinates of these points satisfy the conditions (1). After proving 1 theorem (generalization of the Coon-Tucker theorem) and 5 lemmas, the author shows that the solution of the problem stated above permits the solution of convex programming and the optimum control of linear systems. The method actually reduces the solution of the original problem to the solution of a certain dual problem; the solution of the dual problem allows then, in turn, the solution of the direct problem. In other words, the solution of the original problem together with its limitations is reduced to the maximization of certain functions subject to simple limitations. This makes the method applicable to the solution of optimum control problems. Orig. art. has: 66 formulas.

ASSOCIATION: None

SUBMITTED: 08Jan64 ENCL: 00 SUB CODE: DP

NO REF SOV: 001 OTHER: 002

Card 2/2

L 56472-65 EWT(d)/EPF(n)-2/EWP(v)/T/EWP(k)/EWP(h)/EWP(l) Pq-4/Pq-4/Pf-4/Pg-4/Ph-4/Pu-4/Pk-4/Pl-4 IJB(c) WW/BC

ACCESSION NR: AP5009389 S/0208/65/005/002/0236/0241

518:51:62-50

AUTHOR: Pshenichnyy, B. N. (Kiev)

TITLE: An algorithm for solving a nonlinear problem of optimal control

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 5, no. 2, 1965, 236-241

TOPIC TAGS: optimal control, numerical method, differential equation

ABSTRACT: To minimize the function $g(x(T))$, where $g(x)$ is a given twice-differentiable function in n-space and $x(t)$, $0 \leqslant t \leqslant T$, satisfies the system:

$$\frac{dx}{dt} = f(x, u), \quad x(0) = x_0, \quad u \in U, \tag{1}$$

where U is a closed convex bounded set of an r-space and $f(x, u)$ is a twice-differentiable function of its arguments. Given a certain control $u^0(t)$, we try to improve it by finding a new control $u^{(1)}(t)$ such that $g(x^{(1)}(T)) < g(x^0(T))$. If the system (1) is linear and if all controls $u^{(m)}(t)$ belong to a class L^2, then there is

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L 56472-65

ACCESSION NR: AP5009389

a limiting control for which the maximum principle is satisfied. On this basis it is shown that the simple algorithm presented is a complete solution of the given problem.

Orig. art. has: 33 formulas

ASSOCIATION: none

SUBMITTED: 14Sep64 ENCL: 00 SUB CODE: MA, IE

NO REF SOV: 006 OTHER: 000

Card 2/2

L 09071-67 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC

ACC NR: AP6016132 SOURCE CODE: UR/0103/66/000/005/0028/0036

9

AUTHOR: Pshenichnyy, B. N. (Kiev)

ORG: none

TITLE: Synthesis of linear pulsed systems

SOURCE: Avtomatika i telemekhanika, no. 5, 1966, 28-36

TOPIC TAGS: optimal control, optimal automatic control, automatic control design, automatic control R and D, control theory, automatic control theory, mathematic analysis, mathematic method, mathematic model

ABSTRACT: The author describes the application of H. Weyl's theorem on convex polyhedrons to solutions of optimal control problems, especially to the synthesis of linear pulsed data systems optimized for fast response. The results of this work are sufficiently general to be useful in certain aspects of pulsed data system design. The Weyl theorem states that any polyhedron may be described by a finite system of linear inequalities. The generation of such a system is an elementary problem amounting essentially to test whether a particular point x^0 satisfies the system of inequalities. A similar method may be used in the synthesis of pulsed data systems. A pulsed data system with a single controlling parameter is expressed by the set of equations

$$x^{k+1} = Ax^k + bu_k$$

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L 09071-67

ACC NR: AP6016132 O

where x is an n-dimensional vector, A is a square $n \times n$ matrix, b is a vector and u_k is a control satisfying $|u_k| \leq 1$. The main problem is then to construct u as a function of phase coordinates of initial state x^0 such that the relation $x^k = 0$ is achieved for the minimum value of k. If G_k defines the plurality of points x^0 from which the origin of the coordinates can be reached in less than k steps, and G_k is specified, a simple algorithm for the synthesis of $u(x^0)$ can be set up. The author defines certain properties of convex polyhedrons on the basis of several theorems which he also proves. This analysis is applied to the region G_k, described parametrically by

$$x^0 = \sum_{j=1}^{k} r_j u_j, \qquad |u_j| \leqslant 1 \quad (j = 1, \ldots, k).$$

Additional theorems related to G_k are postulated and proven leading to the generation of a system of linear inequalities describing $G_k (k<n)$

$$|(p^j, x)| \leqslant W_k(p^j) \quad (j = 1, \ldots, n),$$

where p is a vector, such that $\max_{x \in M}(x, p^0) \leqslant (p^0, x^0)$, M is a convex closed bounded plurality, and $W(p) = \max_{x \in M}(p, x)$.

SUB CODE: 07,12 / SUBM DATE: 12Oct65/ ORIG REF: 006/ OTH REF: 005

Card 2/2 nst

ACC NR: AT6034738 SOURCE CODE: UR/0000/66/000/000/0052/0060

AUTHOR: Pshenichnyy, B. N.

ORG: none

TITLE: Numerical methods in linear problems of optimal control

SOURCE: AN UkrSSR. Slozhnyye sistemy upravleniya (Complex control systems). Kiev, Naukova dumka, 1966, 52-60

TOPIC TAGS: optimal control, linear automatic control, algorithm

ABSTRACT: In recent years numerical methods of solving linear problems in optimum control have been intensively developed in the Soviet Union and abroad. The literature describes methods making it possible to solve the basic problems of optimum control without taking phase limitations into consideration. Methods making it possible to take phase limitations into consideration have been worked out in the literature; all known methods of this sort may be divided into these groups: (1) those based on use of the maximum principle and consisting in the selection of initial values of the conjugate system, (2) those based on the principle of descent in the control space, and (3) those based on utilization of the theory of moments. The present work examines merely the first group of methods. It is demonstrated that they may effectively underly solution of an extensive class of linear problems in optimum control. It is demonstrated that the algorithmic systems proposed are also in principle applicable to nonlinear problems, provided that the capability exists to solve effectively the

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ACC NR: AT6034738

the problem of maximizing the linear form of the end of the trajectory in the time assigned. The author does not attempt to give rigorous proofs of the facts adduced, as these may be found in the literature. The chief aim of the article is to demonstrate that algorithms may be compiled for a wide class of optimum problems. The general control problem is studied by means of the formula

$$\frac{dx}{dt} = f(x, u), \quad x(0) = x^0, \quad u \in U, \tag{1}$$

where x is the $(n + 1)^{th}$-dimensional vector with coordinates $x_1, x_2, \ldots, x_n$; and U is the limited closed set. It is concluded that an extensive class of optimum control problems may be reduced to finding the minimum of some function of a finite number of variables; this is obviously the main merit of the method proposed. Orig. art has: 20 formulas.

SUB CODE: 09, 12, 13/ SUBM DATE: 23Feb66/ ORIG REF: 008/ OTH REF: 005

Card 2/2

5.3400,5.3930

77542
SOV/80-33-1-35/49

AUTHORS: Shaltyko, G. Ye., Pshedetskaya, L. I.

TITLE: Investigation of Fungicidal Properties of Shale Tar

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, No 1, pp 212-215 (USSR)

ABSTRACT: The fungicidal properties of shale tar of the "Kokhtla-Yarve" and "Slantsy" factories were investigated. Samples of wood cellulose were impregnated with shale tar solutions in benzene and acetone of the following concentrations (in %): 100, 50, 25, 10, 5, 2.5, 1. Tests were made of stability for 150 days against the wood-destroying fungi, Coniophora cerebella and Merulius lacrymans. Parallel tests were made with coal-tar oil of the Kalinin coal-tar chemical industry. Altogether, 1,080 samples of wood cellulose were tested. It was proved that the above impregnation cannot be used as an antiseptic. There are 3 tables; and 19 Soviet references.

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Investigation of Fungicidal Properties of Shale Tar

77529
SOV/80-33-1-38/49

ASSOCIATION: V. N. Obraztsov, Leningrad Institute of Railroad Engineering (Leningradskiy institut inzhenerov zheleznodorozhnogo transporta imeni V. N. Obraztsova)

SUBMITTED: December 8, 1958

Card 2/2

GELLER, B.E.; PSHEDETSKAYA, V.K.

Properties of concentrated polymer solutions. Part 6: Problem of the invariance of rheograms. Vysokom. soed. 5 no.10:1568-1573 O '63. (MIRA 17:1)

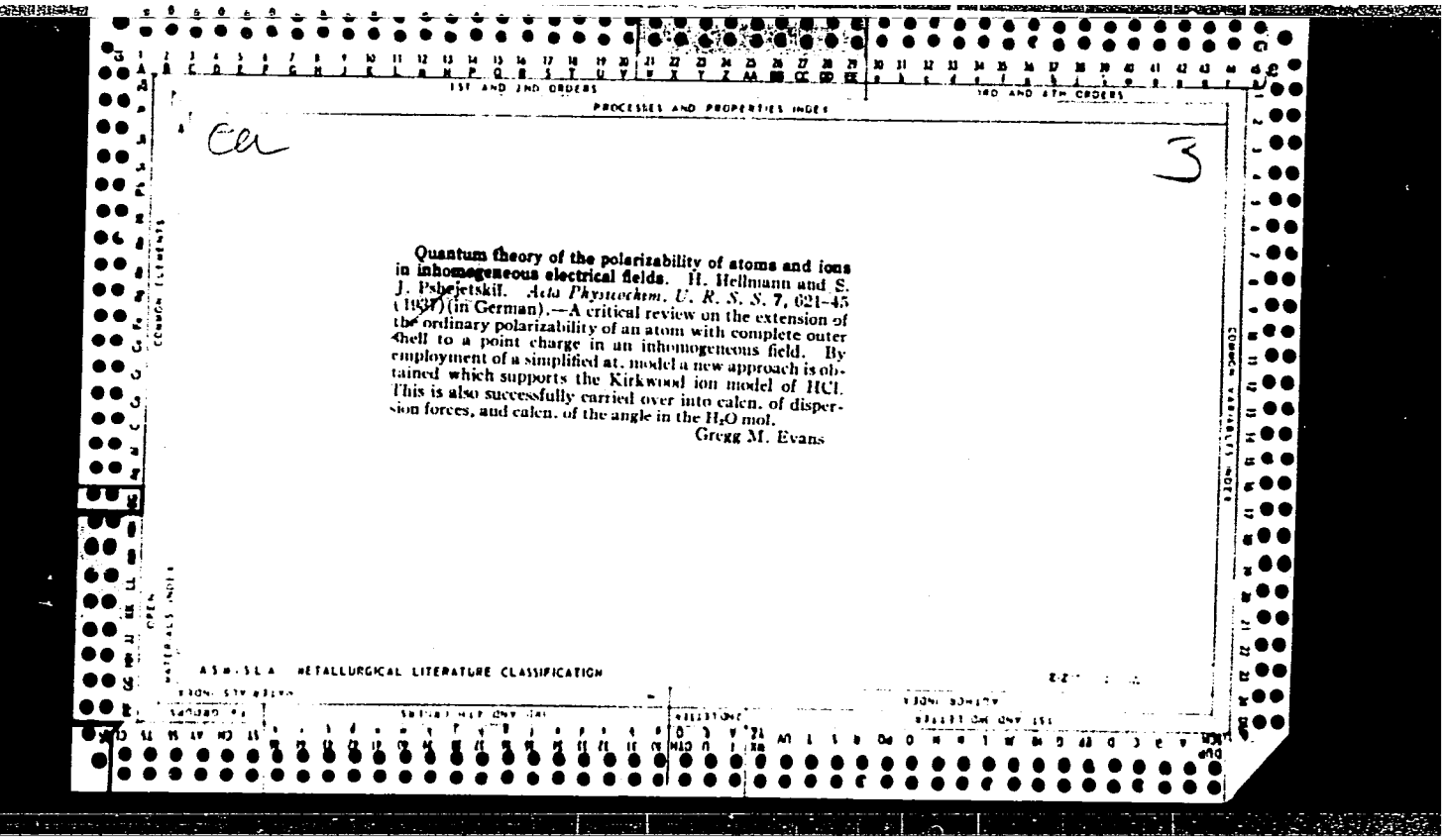
1. Tashkentskiy tekstil'nyy institut.

ZAPROMETOV, B.G.[deceased]; PSHEDETSKAYA, V.K.

Structural properties of reciprocal coagel hydrosols V_2O_5 and $Fe(OH)_3$. Trudy SAGU no.33:11-19 '52. (MLRA 9:5)
(Colloids)

PSHEGORNITSKIY, B.I.

Effect of fixatives on the size of histological elements.
Vest. LGU 20 no.15:156-158 '65. (MIRA 18:9)



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Cu

3

Quantum theory of the polarizability of atoms and ions in inhomogeneous electrical fields. H. Hellmann and S. J. Pshejetskii. *Acta Physicochem. U. R. S. S.* 7, 621–45 (1937) (in German).—A critical review on the extension of the ordinary polarizability of an atom with complete outer shell to a point charge in an inhomogeneous field. By employment of a simplified at. model a new approach is obtained which supports the Kirkwood ion model of HCl. This is also successfully carried over into calcn. of dispersion forces, and calcn. of the angle in the H_2O mol.

Gregg M. Evans

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

PSHEKHOTSKAYA, R.V.; AFANAS'YEV, S.G., kant. tekhn. nauk, red.

[Use of oxygen in the converter process; a bibliography] Primenenie kisloroda v konverternom proizvodstve; bibliograficheskii ukazatel'. [By] R.V.Pshekhotskaia. Moskva, 1962. 129 p. (MIRA 17:8)

1. Moscow. TSentral'naya nauchno-tekhnicheskaya biblioteka chernoy metallurgii.

RADOMYSEL'SKIY, I.D.; NIKISHOV, I.S.; PSHEKOVA, V.P.; SMOLYANKIN, A.B.

Investigating the process of grinding reduced iron sponge and developing a procedure for obtaining iron powders of varying bulk weight. Porosh.met. 2 no.5:51-54 S-O '62. (MIRA 15:11)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.
(Powder metallurgy)

KOT, A.A., kand.tekhn.nauk; PSHEMENSKIY, A.A., inzh.

Investigating the solubility of quartz and sodium metasilicate in superheated steam. Elek.sta. 28 no.12:14-19 D '57 (MIRA 12:3)
(Steam, Superheated) (Quartz) (Sodium silicates)

PSHEMENSKIY, A.A

4705. EFFECTIVENESS OF STEAM WASHING ON HIGH PRESSURE BOILERS. Kot, A.A. and Pshemenskii, A.A. (Elekt. Sta. (Pwr Sta., Moscow), Apr. 1957, vol. 28, 18-22). Results are given of the steam washing carried out in PK 14 boilers having steam output 230 t/h, at 110 ath and superheat temperature 510°C, internal diameters of main and separating drums being 1300 and 900 mm respectively and yield of the intra-drum graded steaming of the salt sections 16%. The main drum was equipped with steam washing devices and the separating drum with control panels and louvres in front of the water overflow pipes. The relation between the silica content of steam in the treated and salt sections, and the effect of the silica content of steam in various other cases, are graphed. C.E.A.

SHAPKIN, I.F.; PSHEMENSKIY, A.A.

Magnetic treatment of water. Energ. biul. no.5:25-28 My '57.
(Feed-water purification) (MLRA 10:6)

PSHEMENSKIY, A. A.

104-4-6/40

AUTHOR: Kot, A.A., Candidate of Technical Sciences and Pshemenskiy, A.A., Engineer.

TITLE: The effectiveness of washing the steam of high pressure boilers. (Effektivnost promyvki para kotlov vysokogo davleniya)

PERIODICAL: "Elektricheskie Stantsii" (Power Stations), 1957, Vol. 28, No.4, pp. 18 - 22 (U.S.S.R.)

ABSTRACT: The effectiveness of washing the steam of a high pressure boiler type ПК-14 has been investigated. The output of the boilers is 230 t/h at a pressure of 110 atm. and a superheat temperature of 510 C. The internal diameters of the main and sub-dividing drums are 1 300 and 900 mm respectively and the output of the salty sections of stepwise evaporation in the drums is 16%. The main drum is equipped with a steam washing device and the sub-dividing drum is fitted with directional shields and screens before the water by-pass tubes.

The investigations of steam washing were carried out whilst delivering chemically purified water directly into the feed water and separately; steam condensate for steam washing and chemically purified water (about 14%) directly into the boiler drum. The chemically purified water was desilicated. During the investigations samples of washed steam from the drum were

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The effectiveness of washing the steam of high pressure boilers. (Cont.) 104-4-6/40

taken from the centre of the drum (clean section steam) and from the ends near the right and left hand sides of the drum (salty section steam). Samples of washing water were taken from the centre of the drum and samples of boiler water from the centre of the drum (clean section) and from the blow-down lines (salty section). The results of the work are presented in the form of graphs and tables. And it is shown that the silica content of the steam from the salty sections is higher than that of the steam from the clean section. However, the silica content of the washed steam is practically independent of the silica content of the boiler water in the different sections. It was shown that when 14% of chemically purified water was added to the feed water the silica content of the washed steam was higher than when the chemically purified water was supplied separately and the steam was washed with condensate. Relationships are plotted between silica contents of steam and silica contents of boiler water and between these figures for washing water and boiler water, washing water and feed water, and others. Increasing the alkalinity of the boiler water (to phenolphthalein) reduces the amount of carry over.

2/3 Operating experience with a 50 MW high pressure turbine

The effectiveness of washing the steam of high pressure boilers. (Cont.)

104-4-6/40

shows that no significant deposits of silica are formed if the silica concentration of the steam is less than 0.02 - 0.03 mg/kg, and to achieve this the silica content of the washing water should not exceed 0.18 - 0.30 mg/kg. Because of the relatively high carry over of silica from the washing water the effectiveness of steam washing was somewhat reduced but by separating the feed to the boiler and washing the steam with condensate the proportion of chemically purified make-up may be much increased. It it is desilicated to 1 mg/l silica and the addition of chemically purified make-up water is 30% boiler blow-down may be about 1.6% or much less if stepwise evaporation is used. In all the experiments the salt content of the super heated steam is independent of the amount of chemically purified water added. In order to verify the operation of the separate feed system with a considerable proportion of chemically purified make-up water it would be advisable to make corresponding tests at a heat and electric power station. There are 9 figures and 1 Slavic reference.

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AVAILABLE:

SOV/49 -58-10-12/15

AUTHOR: Pshenay-Severin, S. V.

TITLE: The Hydrodynamic Interaction of Cloud Droplets at Small Distances (O gidrodinamicheskom vzaimodeystvii oblachnykh kapel' na malykh rasstoyaniyakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, seriya geofizicheskaya, 1958, Nr 10, pp 1254-1257 (USSR)

ABSTRACT: Ref.1 considers the influence of hydrodynamic interaction on the rate of fall of small droplets. In the case of two particles moving in the same direction, the retarding force on the i^{th} drop, which has an undisturbed velocity, $V^{(i)}$, is found to be:

$$V^{(i)} - w(r_{ki}, V^{(k)})$$

Then the retarding forces, $f^{(1)}$ and $f^{(2)}$, by the medium on droplets of radius R_1 and R_2, falling with velocities $V^{(1)}$ and $V^{(2)}$, are given by Eq.(1) for a Stokes' circulation and by Eq.(2) otherwise. (Here $\beta = r_{12} V/\nu$; ν is the kinematical viscosity coefficient of the medium and η, the dynamical viscosity coefficient; $\varepsilon_i = R_i/r_{12}$ $(i = 1, 2)$. Eqs.(1) and (2) can be applied when

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The Hydrodynamic Interaction of Cloud Droplets at Small Distances

$\varepsilon \ll 1$. Factors higher than the first order in ε can be introduced by Faxén' formula (Refs.2 and 3). Stimson and Jeffery's work (Ref.4) enables an accurate expression for the interaction to be found for short distances. These authors considered a Stoke's circulation and obtained $f^{(i)} = \lambda (6\pi\eta RV)$, where λ is given by Eq.(3) and α is given by $ch\alpha = r_{12}/2R$. Ref.4 gives values of λ for various α . Faxen obtained a value $\lambda = 0.645$ for spheres in contact. The author considers two droplets travelling with different velocities, with a Stokes circulation (Fig.1). Using the methods in Ref.4 he obtains Eq.(4) for $f^{(1)}$ and $f^{(2)}$. Table 1 gives the results of calculations from Eq.(4) of λ_1 and λ_2 (where $f^{(1)} = \lambda_1$, $f^{(1)}_{st}$ and $f^{(2)} = \lambda_2 f^{(2)}_{st}$; $f^{(i)}_{st} = -6\pi\eta R_i V$) . As a comparison the values of λ_1 and λ_2

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The Hydrodynamic Interaction of Cloud Droplets at Small Distances

from the approximate Eq.(1) are also given. It is thus possible to determine the limit of application of the latter. Thus for an error less than 10%, ε must be less than 0.2. Table 2 gives rates of fall of water droplets in air calculated from Eq.(4). The data show that the hydrodynamical interaction increases the rate of fall. There are 2 tables, 1 figure and 4 references, of which 2 are German, 1 Soviet and 1 English.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki (Academy of Sciences, USSR, Institute of Applied Geophysics)

SUBMITTED: October 1, 1957.

L 11216-67 EWT(1)/FCC GW/WS-2

ACC NR: AR6016948 SOURCE CODE: UR/0169/65/000/012/B029/B029

28

12

AUTHOR: Pshenay-Severin, S. V.

TITLE: Estimate of influence of internal heat sources on the motion of atmospherics in the subcloud layer

SOURCE: Ref. zh. Geofizika, Abs. 12B194

REF SOURCE: Tr. In-t prikladn. geofiz., vyp. 1, 1965, 36-38

TOPIC TAGS: ~~atmospheric~~, atmospherics ~~motion~~, ~~atmospherics motion analysis~~ heat source, heat effect

ABSTRACT: The motion of an atmospheric is considered in the presence of internal heat sources of given intensity. The system of differential equations describing the velocity of the atmospherics motion and the variation of the excess temperature in it under assumption of equality of the coefficients of dissipation and addition of heat is reduced to one equation of the type $\ddot{U} - 2k\dot{U} + (k^2 - g\gamma/T)U = g\gamma/T$

Solution of this equation is given for $\gamma>0$ (unstable layer), $= 0$ (neutral layer) and $\gamma<0$ (stable layer). The ascent velocity U and the excess temprature Δ have been obtained in analytical form. Length of path in a stable layer is inversely proportional to the dissipation coefficient k. [Translation of abstract].

SUB CODE: 04

UDC 551.576

Card 1/1 jb

L 40013-66 EWT(1) GW

ACC NR: AP6006133 SOURCE CODE: UR/0362/65/001/010/1095/1098

17
B

AUTHOR: Pshenay-Severin, S. V.; Rudneva, I. A.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: The movement of a thermal current containing large condensation nuclei in a stable subcloud layer

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery okeana, v. 1, no. 10, 1965, 1095-1098

TOPIC TAGS: atmospheric circulation, cloud formation, cloud physics

ABSTRACT: The movement was investigated on the assumption that it is a function of the velocity of the current, its temperature, its relative humidity, and the number of salt solution drops present in the system. A system of nonlinear differential equations were derived and solved using the Runge-Kutta method and a Ural-1 computer. The data show that 1) for the initial current velocity $U_0 > 0$, the admixture of salt particles tends to diminish the rate of decrease of the thermal current velocity in a stable layer; 2) the magnitude and sign of acceleration depend on the concentration of salt particles, the initial current velocity, temperature and density; and 3) the presence of even a few salt particles (~10 mg/kg) produces an increase in the velocity of a thermal current owing to the liberation of the heat of condensation. Orig. art. has: 2 figures, 3 formulas.

SUB CODE: 04/ SUBM DATE: 23Jan65/ ORIG REF: 001/ OTH REF: 003

Card 1/1 UDC: 551.571.7

24(1)

AUTHOR: Pshenay - Severin, S. V. SOV/20-125-4-23/74

TITLE: The Mutual Attraction of Aerosol Particles in a Sound Field Under the Effect of Hydrodynamic Forces of Oseen (O sblizhenii aerozol'nykh chastits v zvukovom pole pod deystviyem gidrodinamicheskikh sil Oseyena)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 4, pp 775-778 (USSR)

ABSTRACT: A short report is first given on earlier papers dealing with this subject. Both the inertia forces and the viscosity forces can be taken into account on the basis of the hydrodynamical equation of Oseen. In the case of two particles located comparatively closely together, each of them will perturb the flowing-round field of the other. If the line connecting their centers agrees with the direction of the air current flowing round it (or deviates only little from this direction), the resistance of each individual particle is bound to decrease as a result of the interaction of the two particles. Owing to the difference in the velocity of the medium before and behind each particle, the resistance in the case of the "head-particle" will decrease to a lower extent than in the case of the "tail-

particle". This difference in the decrease in resistance is equivalent to the effect produced by a certain attractive force acting among the particles under investigation. Such hydrodynamic forces were investigated for the first time by Oseen (Refs 8,9). Because of the linearity of the hydrodynamical equation by Oseen it is possible, when investigating the interaction of particles, to base upon the assumption of the superposition of the flow fields of the particles and to evaluate the approximated value of the power of resistance acting upon each of the particles according to the formula $D_i = 6\pi\eta R_i(V_i - u_k)S(Re_i)$. Here $V_i = U - v_i$ denotes the undisturbed velocity of flow round the i-th particle, u_k - the disturbed velocity of flow round, which was calculated from the flowing-round field of the k-th particle in the center of the i-th particle (i = 1,2; k = 2,1). In first approximation $u_1 = (3/2)\varepsilon V_1$ and $u_2 = (3\varepsilon^2/Re)V_2$ may be assumed. In the case of $\varepsilon \ll 1$, u_2 is negligibly small as against u_1, and it is possible to put $u_2 = 0$. In this way the scheme of the

unilateral hydrodynamic action of the "head-particle" upon the "tail-particle" is obtained. Calculation of the relative motion of particles in the sound field is in this way considerably simplified. The influence exercised by the interaction between particles upon their relative motion is probably considerably greater in the case of an Oseen flow than in the case of a potential one. The formulas given above are, strictly speaking, applicable only in the case of a steady flow of the medium round the particles. In the sound field the magnitude and the direction of the velocity of the flow round the particles change. However, in the case of a low sound frequency, the processes taking place during the flow of air round particles having a radius of from $\sim$ 1 to 10 μ may obviously be considered to be quasisteady. For a given R there exists an optimum value of the sound frequency, at which the approximation velocity of the particles (in the case under investigation drops are concerned) is maximal. Oseen's forces are effective in the case of drops within the dimensions of from 1.5 to 15 μ. With R$\sim$5 to 15 μ the most favorable sound frequencies are of the order of magnitude of

some hundreds of cycles, and at $R < 5\ \mu$ they are of the order of some megacycles. The values found must be considered to be maximum values, which must yet be more precisely defined and explained. More accurate investigations are necessary. The author thanks L. M. Levin for discussing the results obtained by this investigation and for his advice. There are 2 figures and 10 references, 2 of which are Soviet.

ASSOCIATION: Institut prikladnoy geofiziki Akademii nauk SSSR (Institute for Applied Geophysics of the Academy of Sciences, USSR)

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VUL'FSON, N.I., doktor fiz.-matem. nauk, otv. red.; LEVIN, L.M., doktor fiz.-matem.nauk, otv. red. Prinimali uchastiye: KOMAROV, N.N., red.; PSHENAY-SEVERIN, S.V., red.; UGAROVA, K.F., red.; NIKOLAYEVA, L.K., red. izd-va; BERKGAUT, V.G., red. izd-va; VOLKOVA, V.V., tekhn. red.

[Study of clouds, precipitation, and thunderstorm electricity; reports] Issledovaniia oblakov, osadkov i grozovogo elektrichestva; doklady. Otv. red. N.I.Vul'fson, L.M.Levin. Moskva, Izd-vo Akad.nauk SSSR. 1961. 327 p. (MIRA 15:1)

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S/123/59/000/008/019/043
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Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 8, p. 73, # 29111

AUTHOR: Pshenev, G. A.

TITLE: Bending Machine for Small-Diameter Pipes

PERIODICAL: Byul. tekhn.-ekon. inform. Sovnarkhoz Stalinskogo ekon. adm. r-na, 1958, No. 5, pp. 39-40

TEXT: Bibliographic entry

Card 1/1

PSHENEV, M., master proizvodstvennogo obucheniya

Inculcating interest in the promotion of efficiency. Prof.-tekh. obr. 18 no.2:22-23 F '61. (MIRA 14:3)

1. Tekhnicheskoye uchilischche No.13, Moskva.
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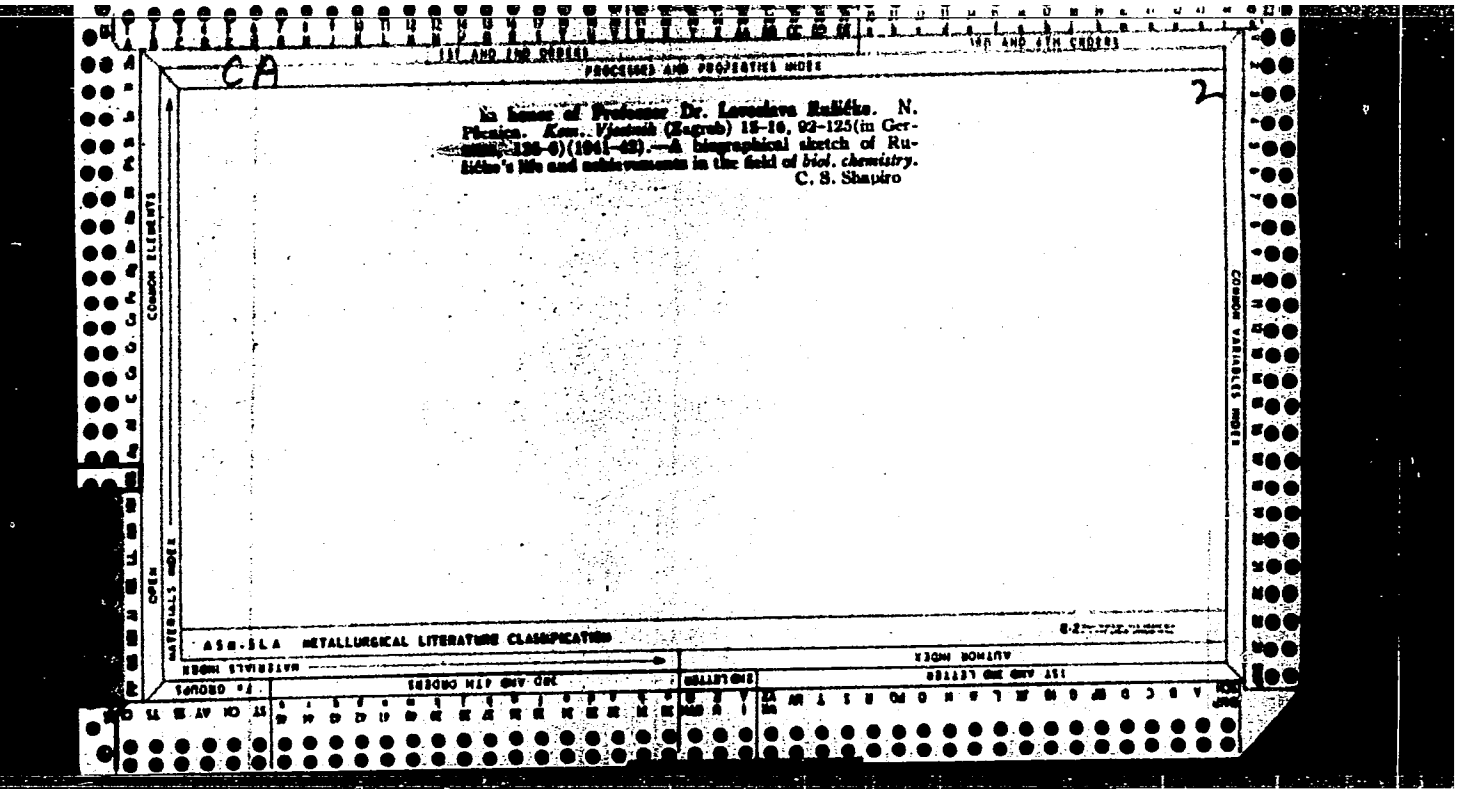
(Technological innovations)



CA

2

In honor of Professor Dr. Lavoslava Ružička. N. Plenica. *Kem. Vjesnik* (Zagreb) 15-16, 92-125(in German)(1941-42).—A biographical sketch of Ružička's life and achievements in the field of *biol. chemistry*.
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Large flexures of a netted shallow cylindrical shell. Inzh.sbor. 31:101-107 '61. (MIRA 14:6)
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New diagram of the block of the TP-100 boiler unit. Energ. stroi. no.34: 20-26 '63. (MIRA 17:1)

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PSHENICHKIN, A.I., inzh.-konstruktor

Machine for cleaning mine cars. Ugol' 35 no.8:62 Ag '60.
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(Mine railroads--Cars--Cleaning)

[redacted]

Joint performance of building and foundation bed under conditions of great deformations during the compaction of loess strata by the weight of the structures. Osn., fund. i mekh. grun. 7 no.3: 13-16 '65. (MIRA 18:6)

L 65036-65 EWP(e)/EWT(m)/EPF(c)/EWP(1)/EWP(b) WH/WW

ACCESSION NR: AP5020776 UR/0226/65/000/008/0087/0095

AUTHOR: Fialkov, A. S.; Davidovich, Ya. G.; Pshenichkin, P. A.; Galeyev, G. S.

TITLE: Magnetic susceptibility and linear thermal expansion of carbon graphite materials

SOURCE: Poroshkovaya metallurgiya, no. 8, 1965, 87-95

TOPIC TAGS: carbon, graphite, pitch material, coke, magnetic susceptibility, thermal expansion, crystal anisotropy, magnetic anisotropy

ABSTRACT: Materials tested included cracking and pyrolysis cokes, lamp black, natural graphite, and middle temperature coal distillation residue (pitch). Properties of the materials are given in a table. The samples were tested in their initial state and after calcining at different temperatures. The pressed samples, measuring 115x215x30 mm, were sintered in electric furnaces at 900C and were graphited at 2700C. The magnetic susceptibility was measured by the method of Guy. The linear expansion was measured by a contactless method up to a temperature of 3000C. The coefficient of anisotropic linear expansion, K_a, was calculated from the formula $K_a = a_{\parallel}/a_{\perp}$, where $a_{\parallel}$ and $a_{\perp}$ are the coefficients of

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ACCESSION NR: AP5020776

linear expansion measured parallel and perpendicular to the direction of pressing. It was established that the coefficient of anisotropic linear expansion in polycrystalline carbon graphite materials, and their coefficient of anisotropic diamagnetic susceptibility, are always less than for a graphite monocrystal. The article sets up a relationship between the anisotropic diamagnetic susceptibility and the linear thermal expansion of carbon graphite materials. It is established that the coefficient of anisotropic diamagnetic susceptibility is the criterion for the development of a crystallographic grain structure in the material, and that it chiefly determines its formation in the powder form components. Maximum structural isotropy in carbon graphite materials made from petroleum cokes is attained after heat treatment at a temperature corresponding to a minimum value of the coefficient of diamagnetic susceptibility (from 600-700C). The effect of the binder content on the magnetic susceptibility and the linear expansion of carbon graphite materials is discussed. Orig. art. has: 10 figures and 2 tables

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NR REF SOV: 001 OTHER: 008
Card 2/2

FIALKOV, A.S.; DAVIDOVICH, Ya.G.; PSHENICHKIN, P.A.; GALEYEV, G.S.

Diamagnetic susceptibility and the linear thermal expansion of carbon graphite materials. Porosh. met. 5 no.8:87-95 Ag '65. (MIRA 18:9)

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Temperature dependence of the magnetic susceptibility of manganese-copper alloys. Zhur. eksp. i teor. fiz. 43 no.2:370-375 Ag '62. (MIRA 16:6)

1. Moskovskiy gosudarstvennyy universitet.
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